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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,515	01/05/2001	Shihong Yu	0739D-000086	7460

7590 05/28/2003

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EXAMINER

VU, STEPHEN A

ART UNIT	PAPER NUMBER
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3636

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/755,515

Applicant(s)
Yu

Examiner
Stephen Vu

Art Unit
3636



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 8, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-35 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-27 and 29-35 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

Art Unit: 3636

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Ryan.

Ryan shows a seat assembly comprising a seat (14), a seat back (16) connected to the seat (14), and a fold-flat hinge assembly (10) including: a support member (18), an arm (98) pivotally supported by the support member, mounting the seat back, and including a plurality of gear teeth (96) formed thereon. A shaft (106) is rotatably supported within a first slot of the support member and a blocking pin is slidably supported by the support member and in mechanical communication with the shaft. The blocking pin is slidable to a first position wherein the blocking pin prevents forward rotational motion of the arm relative to the support member; and a gear (90) fixedly attached to the shaft and interacting with the gear teeth of the arm to move the blocking pin to a second position wherein the arm is free to rotate relative to the support member and whereby the seat back is rotatable relative to the seat.

With claims 17 and 22, at least one lever arm is pivotally attached to the support member at a pivot point and wherein the lever arm rotatably supports the shaft at a first end and a

Art Unit: 3636

link arm at a second end, with the link arm further connecting to the sliding pin.

With claims 18 and 23, a slot is formed in the arm and a stop pin is attached to the support member. The slot slidably interfaces the stop pin for defining a rotational range of motion of the arm relative to the support member.

With claim 20, the arm is able to rotate relative to the support member when the shaft is in the second position.

With claims 19 and 24, the shaft is also slidably supported in the first slot by the support member for sliding from a first position to a second position in response to the gear interacting with the gear teeth for moving the blocking pin to the second position.

With claim 25, the arm can rotate relative to the support member when said shaft is in said second position.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

Art Unit: 3636

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 26-27 and 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan in view of Weston et al.

Ryan discloses the claimed invention except for the seat hinge to have an electric motor for rotating the shaft. Weston et al teaches the use of an electric motor (C) for rotating the back relative to the seat. It would have been obvious to one of ordinary skilled in the art at the time the invention was made to employ an electric motor as taught by Weston et al to the seat hinge of Ryan's invention to rotate the shaft, without the need for manual adjustment by the user.

With claim 31, at least one lever arm is pivotally attached to the support member at a pivot point and wherein the lever arm rotatably supports the shaft at a first end and a link arm at a second end, with the link arm further connecting to the sliding pin.

With claim 32, a slot is formed in the arm and a stop pin is attached to the support member. The slot slidably interfaces the stop pin for defining a rotational range of motion of the arm relative to the support member.

Art Unit: 3636

With claim 33, the shaft is also slidably supported in the first slot by the support member for sliding from a first position to a second position in response to the gear interacting with the gear teeth for moving the blocking pin to the second position.

With claim 34, the arm can rotate relative to the support member when said shaft is in said second position.

Allowable Subject Matter

6. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Remarks

The examiner has reviewed and considered the comments in the Response, filed on April 8, 2003. Based on an updated prior art search, the examiner has decided to issue a new ground of rejections. Accordingly, this Office action has considered to be Non-final.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Randolph, Easley, Werner et al, and Cragg are cited as showing similar types of fold-flat seat hinge assembly.

Art Unit: 3636


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A Vu whose telephone number is 703-308-1378. The examiner can normally be reached on M-F, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M Cuomo can be reached on 703-308-0827. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



Stephen Vu
Patent Examiner
May 22, 2003



Peter M. Cuomo
Supervisory Patent Examiner
Technology Center 3600